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## Description

This invention relates to a new carpet formulation and in particular to a new carpet backing for use in combination with a new installation device, and to a novel carpet installation system. Specifically, the invention relates to a laminated carpet system and a carpet laying method for laying a laminated wall-to-wall carpet.

At the present time, most mass produced carpets are either of tufted or woven construction.

Tufted carpets are made by needling pile yarns into a supporting pre-woven or non-woven fabric, called the primary backing. the woven fabric can be of jute or polypropylene, and the non-woven fabric is usually of polypropylene.

After the pile tufts have been needled into the primary backing, they are bonded to the primary backing, usually by way of a bonding agent, such as latex or other suitable adhesive material. It is common practice to add a secondary backing of woven or spun-bonded man-made fabrics or of jute, which is adhered, by pressing the backing onto the latex while still tacky. This form of construction is referred to as "tufted" carpet which is usually installed upon an underpad, the tufted carpet generally having little or no inherent tread resiliency of its own.

The installation technique most commonly utilized with such a carpet is referred to as the "tackless" or "smooth-edge" form of installation because of the absence of any visible fasteners, thus presenting a carpet having a "smooth edge" appearance without carpet tacks.

This system was originated in 1938 by the Roberts Company. in this method, strips of plywood of approximately 6.35 mm (1/4") thickness, by 38.1 mm (1-1/2") width and in 1.22 m (four foot) lengths are installed around the perimeter of the room or the area to be carpeted. The strips are available either without nails or with pre-started nails and can be either glued or nailed to the floor. The strips have two staggered rows of steel pins, projecting points uppermost and inclined laterally at an angle of 60° for installation outwardly inclined towards the wall.

With this system of installation, the carpet is placed in its approximate position on the floor and is stretched by means of the use of a power stretcher or knee kicker. Stretching in this system is essential to compensate for expansion and to take out or prevent wrinkles or buckles which will otherwise develop in use, which are unsightly and also present a tripping hazard and can shorten the life of the carpet by undue wear of such wrinkled portions.

In using the tackless installation system, the carpet must possess a sufficient degree of resili-

ence in order that it can stretch resiliently on installation. Stretch is important to provide adequate residual tension in the carpet and on the steel pins at the perimeter of the carpet to ensure that the pins retain their grip and hold the carpet adequately secured.

In order to achieve adequate anchoring of a carpet, it is necessary that the steel pins grip into the secondary backing of carpet. Thus, the secondary backing and the bond between the primary and secondary backing must be substantial and sufficiently rigid to provide an adequate substrate for the pins to grip and to prevent the carpet from moving off the pins and coming loose from the floor.

The rigidity required of tufted carpets to afford the requisite pin holding characteristics make them hard to handle especially as the latex often has a filler or hardener, commonly referred to as "clay", mixed with it to add mass and stiffness, and provide a heavy carpet with adequate dimensional stability. The provision of such dimensional stability and an effective latex bond have apparently been found to be necessary to ensure that such carpet can be properly installed using the existing conventional tackless system without subjecting the carpet to the risk of being distorted, ripped apart or in some way unacceptably damaged. For these reasons a heavy basis weight secondary backing material is used.

This type of carpet also requires the prior installation of an underpad up to the edge of the tackless strip, but, more importantly, it is hard to handle because not only is it too stiff and lacking in maneuverability, but also it is very heavy. Under colder conditions, the carpet back becomes progressively stiffer, harder and less workable. Since the carpet is commonly manufactured in widths of 3.66 m (12 feet) and frequently in lengths of 30.5 m (one hundred feet), there is required a considerable amount of physical labour to carry pieces of the carpet about and to lay them correctly in the proper position.

In addition, the stretching of such a rigid carpet is a highly labour-intensive, skilled and difficult affair which involves the use of a power stretcher or knee kicker. Both require expertise to operate and it is possible to damage the carpet during this stretching process by either inserting the teeth too deeply into the carpet so that they grip and rip the underpad below the carpet, or by inserting the teeth too shallowly so that they scrape the primary backing off the carpet secondary backing, and rip or damage it. When the carpet is cold, it is difficult to get correct penetration of the teeth of the knee gripper into the carpet in order to properly stretch it.

The foam backed type of carpet, as it is called, has a primary backing and a layer of foam or urethane bonded directly to the primary backing. However, such foam-backed carpet cannot be installed by the tackless method because foam backing is not sufficiently strong to hold the pin of the tackless strips. Simply, the foam or urethane would rip and not hold if it were stretched onto the pins of a tackless installation.

Accordingly, foam-backed carpet products have been installed by cementing them down over the entire backing surface. Carpet installed by such procedures is often difficult to remove. The adhesive holds the foam; and when attempts are made to remove it, a delamination may occur in which the foam remains on the floor and the primary backing comes up. The resulting foam and adhesive is difficult to remove.

Also, the foam is liable to disintegrate, causing considerable difficulties. Sometimes in residential areas, foam-backed carpet is installed as a "loose-lay", being only held down by the re-installation of a quarter-round trim or by use of a double sided adhesive tape.

Both loose-lay and double-sided adhesive tape do not generally hold such carpet down sufficiently, especially on heavy traffic areas or areas where heavy furniture is moved.

While foam-backed carpet has the advantage that it does not require an underpad and can usually be more readily installed, its installation techniques are not considered to be totally satisfactory because of the previously mentioned problems with gluing and taping.

A third type of carpet is a woven carpet in which the backing and the yarn are woven directly together. This type of carpet is usually installed in accordance with the same tackless method as the tufted carpet construction previously mentioned and suffers from some of the same drawbacks.

FR-A-2 328 432 relates to carpet tiles comprising a loop and hook system. The loop means are attached to an underpad which is glued to the floor. A primary backing layer of the tiles comprises pile elements covering a first side of the primary backing layer, and hook elements covering a second side of the backing layer, with a synthetic caoutchouc layer provided between the primary backing and the hook elements.

The present invention attempts to improve on both the construction and method of installation of tufted and woven carpets and the structure and method of installation of foam-backed carpet. This object is achieved by the carpet system, carpet, and carpet laying method according to the claims. The present invention provides a form of laminated carpet in combination with a new carpet anchoring product and a method of application thereof to a

floor.

The laminated carpet can be manufactured of tufted yarn onto a primary backing in the conventional manner. However, a secondary backing is provided consisting preferably of a layer of polypropylene or other suitable man-made fiber in which a series of fine projecting strands or loops are needed. The secondary backing is positioned so that the strands or loops extend downwardly away from the pile of the carpet. The secondary backing is then laminated to the primary backing, being bonded by means of latex or other suitable adhesive to the back surface of the primary backing, such that the strands or loops of the secondary backing extend downwardly and the yarn of the pile extends upwardly. The secondary backing can be lightweight as there is no requirement for great tearing strength as large stretching forces are not required in laying the carpet. However, heavier or lighter backings may be used depending on the situation.

With this construction, the downwardly projecting loops add additional tread resiliency to the carpet as well as providing a method of affixing the carpet to the floor, as will be seen later. At the same time, owing to the characteristics of the carpet anchoring system, the undue rigidity of the carpet is no longer essential and a lighter, more flexible, construction results. Thus, in one example of the invention, the primary and secondary backing are attached together by the use of latex or an equivalent. However, because the means of installation of the carpet do not require the same rigidity, "clay" does not have to be mixed with the latex to make the tufted carpet rigid, as is often considered necessary in the case of the present tufted carpet.

In an alternative embodiment, a foam or urethane layer, with an appropriate bonding agent, if required, is placed between the forementioned primary and secondary backings. With the bonding agent, the foam can act both as an adhesive and as a layer to provide resiliency and stabilization to the carpet. The secondary backing is attached to the foam and has downwardly extending loops or strands in accordance with the invention. This structure enables foam carpet to be installed in accordance with the method disclosed below.

In accordance with the present invention there is provided a laminated carpet having enhanced stability in comparison with the former foam backed carpeting and having less weight and greater flexibility than the former tufted carpet while, in the preferred embodiment, possessing tread resiliency as a consequence of the provision of a layer of downwardly extending loops or strands to form the undersurface thereof. The subject carpet further enables the use of an intermediate foam layer if

preferred located between the carpet primary backing layer wherein the pile is secured and the secondary backing layer by which the anchor loops or strands are attached. In this laminated carpet the primary backing is generally unchanged. Some changes in primary backing basis weight may be favourably affected, in view of the totally changed nature of the laminated carpet.

Polypropylene in woven and non-woven form and having a low basis weight is considered suitable for the secondary backing layer. The bonding agent requires little or no clay ballasting, leading to a more resilient and lighter laminated construction.

The present invention further provides in combination with the subject carpet an anchor system having, in the preferred embodiment, upstanding hook portions secured thereto for engaging the loops of the carpet in anchoring engagement. The anchor substrate preferably is coated with a contact adhesive on its face remote from the hook portions, having a peelable barrier paper adhering thereto in protective, removable relation. The upper face of the anchor system can also have a hookless area on which an adhesive can be coated to affix a protective peelable barrier on the upper face to prevent premature engagement of the hooks with the loops.

The anchor system generally is provided in strip form, having a width of 25.4 mm (one inch) or greater, for jointing.

A heavy duty extruded plastic anchor strip to provide a more rigid system may incorporate foam in the adhesive system in order to facilitate installation on certain types of floors having uneven surfaces. Owing to the generally low profile of the strip and the fact that the hook portions penetrate upwardly in entering relation with the loops of the carpet, the presence of the anchor means beneath the carpet is comparatively inconspicuous particularly when compared with the relative thickness of the prior art nailing strips. This makes the anchor system substantially unnoticeable, and permits the anchor strip to be used in carpet stabilizing relation in areas additional to the carpet borders. Thus, the anchor strips can be used in stabilizing relation with the carpet in high traffic areas in the middle of a room or at carpet joints.

The nature of the hook portions, being formed in plastic, such as nylon filament to provide somewhat of a hook effect in cooperation with the strand or loop filaments of the carpet affords a break-free capability by which the carpet can be pulled upwardly when required clear of the anchor without damaging the hooks, the loops or the carpet.

The number of hooks per 6.35 cm<sup>2</sup> (square inch) of the anchor strip can be varied in accordance with the desired characteristics, both of the anchor and the looped carpet. It will be appreciated

that this invention provides a great many advantages over the prior art, both in regard to the previously listed carpet characteristics, the capability of minimizing or dispensing with an underfelt or under pad, the provision of a resilient loop or strand layer over the foam so as to protect the foam from damage and deterioration experienced with many foams and the capability to achieve the characteristics of a foam underpad as an interlayer with reduced likelihood of deterioration and no danger of undesired adhesion to the underlying floor surface.

It will also be appreciated that the hook elements could be installed on the secondary backing of the carpet and the loop elements on the anchor system, but with the presently designed hooks, this would not give the benefits of resiliency associated with the loops since the presently designed hooks are relatively harder and more brittle.

The subject anchor strip can be nailed to underlying floor surfaces if required. Generally, however, it is adhered by way of its own adhesive, pressure sensitive backing which lends itself to widespread utilization in a variety of environments. By simply peeling off the protective paper covering and pressing the adherent back surface thus exposed on to the available floor surface, the anchor type can be easily laid as required.

With the system used with this invention, conventional carpet joining by the use of hot melt tape, glue or nails would not be required. Thus no electricity or hot melt iron would be required on the site. Since the hot melt system will not be used, there would be no possibility of burning the top side of the carpet or spilling adhesive or glue.

An appropriately sized width of tape incorporating the anchor system (in the preferred embodiment-hooks) will be attached to the floor at either end or along its entire length. In the preferred embodiment, the upstanding hooks are protected by a peelable paper barrier until such time as fastening is required. The carpet is positioned along the seam. As fastening is required, in accordance with standard installation procedures, the paper barrier is removed and the carpet attached. Seams can be opened or closed at will as many times as needed for seam adjustment or restretching. If the tape is only fastened at the ends, the carpet is not therefore attached to the floor at the seams, and the seams are free to move as required during stretching.

The present invention further provides a system for attaching the laminated carpet to a floor area. The carpet having one portion of the anchorage combination incorporated into the carpet having anchorage elements facing downwardly to be positioned over a surface area having a complementary portion of the anchorage combination

secured thereto with the anchorage elements facing upwardly. The carpet is then moved downwardly to bring the complementary anchorage components into mutual engaging relation to anchor the carpet.

In most instances the floor-attached portion of the anchorage combination comprises a tape of limited width and shallow depth having an adhesive underside portion which is brought into adhering relation with the adjoining floor surface.

In the case of certain uneven floor surfaces, the tape having hook elements extending upwardly thereof can be provided with a spongy resilient adhesive coated undersurface to achieve adhesion to the floor surface.

Certain embodiments of the invention are described reference being made to the accompanying drawings wherein:

Figure 1 is a sectional elevation of a first laminated carpet embodiment in accordance with the present invention;

Figure 2 is a general view of an anchor tape in accordance with the present invention, and

Figure 3 is a view, similar to Figure 1, of a laminated carpet embodiment incorporating a foam layer therewith.

Figure 4 is a perspective view of one area of a room with the anchor tape installed prior to installation of carpet.

Referring to the drawings, the two illustrated laminated carpet embodiments 10 and 50 (Figures 1 and 3) comprise a primary backing layer 12 into which is sewn a level loop pile 14. It will be understood that alternative pile formation, such as cut pile, plush, random shear, cut and loop, multi-level loop, and others, are substantially equally well suited to the present laminated construction. The loop pile 14 may be made of any presently used fibres such as nylon, acrylon, antron (all trade marks for various man-made fibres) or natural fibres.

A secondary backing layer 16 has a layer of loops 18 needled into it, generally covering the whole of the back area of the carpet 10. It is preferable that the loops be applied to the entire undersurface to provide uniform resiliency, ease of manufacture and convenience of installation.

A binding layer 20 of latex 21 in the Figure 1 embodiment serves to join the primary backing layer 12 to the secondary backing layer 16. In the Figure 3 embodiment a foam layer 40, generally between 142 g (5 oz) to 1134 g (40 oz), is laminated between primary backing layer 12 and secondary backing layer 16.

The primary layer 12 and the secondary layer 16 will usually be of polypropylene or nylon.

Referring to Figure 2, the anchoring means is illustrated as a tape 22 having an upper substrate

24 with a plurality of plastic hook portions 26 of suitable hooked profile upstanding therefrom. A contact adhesive layer 28 and protective strippable cover 30 provide a means to attach the tape to a floor when the cover is removed. A protective strip-able cover on the hooks (not shown) is a preferred option to be attached to an exposed hookless area by contact adhesive along one or both edges of the upper face to prevent, during installation, premature attachment of the hooks to the loops covering the back area of the carpet.

As previously mentioned, the position of the hooks and loops can be reversed, so that the hooks are on the underside of the carpet. However, this is not preferred because the loops, as presently shown, provide greater resiliency to the carpet than hooks.

### Claims

1. A laminated carpet system, comprising a carpet and anchor means for use in wall-to-wall installation in a location by cutting and fitting of the carpet to fit the contours of the location on-site and for attachment of the carpet on-site to a floor, the carpet system comprising
  - (i) a primary backing layer (12) having pile element means (14) substantially covering a first side of the primary backing,
  - (ii) a secondary backing layer (16) having loop element means (18) substantially covering a first side of the secondary backing,
  - (iii) means (20) for securing the secondary backing layer (16) to the primary backing layer (12) so that the pile element means (14) and loop element means (18) are exposed on opposite faces of the carpet, and
  - (iv) a separate or separable strip-like piece having hook means (26) on a first side and having means on a second opposite side for on-site attachment to the floor to attach such hook means (20) to at least a portion of the loop element means (18) on the secondary backing layer (16) by engagement of the hook means (26) into the loop element means (18) to hold such carpet to the floor without a separate underpad;
  - (v) wherein the carpet is substantially free of stiffener so as not to require stretching in wall-to-wall applications by the use of mechanical devices.
2. The laminated carpet system as claimed in claim 1 wherein the means for securing the secondary backing layer (16) to the primary backing layer (12) includes an adhesive (21) coated along substantially the entire surface of the second side of the primary backing layer

- (12) to seal the pile element means (14) into the primary backing layer (12).
3. The laminated carpet system as claimed in claim 1 wherein the means for securing the secondary backing layer (16) to the primary backing layer (12) includes a foam layer (40) interposed between the primary backing layer (12) and the secondary backing layer (16) having adhesive and resilient cushioning properties.
  4. The laminated carpet system of claim 3 in which the foam layer (40) is latex.
  5. The laminated carpet system of claims 1 to 4 in which the hook means are supplied separately as a tape (22) of relatively narrow width.
  6. The laminated carpet system of claims 1 to 5 in which the on-site attachment means for the hook means is a pressure-sensitive adhesive (28).
  7. The laminated carpet system of claim 6 in which the pressure-sensitive adhesive (28) on the hook means is coated with a release paper (30) which prevents adhesion and which can be peeled and removed to enable the hook means to be attached to the floor.
  8. The laminated carpet system of claims 1 to 7 in which the hook means is further provided with hook cover means on the first side of the hook means (26) so as to prevent premature attachment to the loop element means (18).
  9. The laminated carpet system of claim 8 in which the first side of the hook means (26) contains a hookless area and the hook cover means comprises a release paper attached to this area by a pressure-sensitive peelable adhesive and in which the paper extends over the hook means (26) to prevent premature engagement of the hooks with the loops.
  10. A laminated carpet system, comprising a carpet and anchor means for use in wall-to-wall installation in a location by cutting and fitting of the carpet to fit the contours of the location on-site and for attachment to a floor, the carpet system comprising
    - (i) a primary backing (12) having pile (14) substantially covering a first side of the primary backing.
    - (ii) a secondary backing (16) having one part of a hook and loop attachment system (18,26) substantially covering a first side of
- the secondary backing.
- (iii) adhesive means (21) coated along substantially the entire surface of the second side of the primary backing (12) to seal the pile into the primary backing and to attach the primary and secondary backing (12,16) to each other, and
  - (iv) a separate strip-like piece (22) having a second part of the hook and loop attachment system (18,26) on its top side and having pressure-sensitive adhesive means (28) on its bottom side for on-site attachment to the floor.
  - (v) wherein the carpet lamination is substantially free of stiffener so as not to require stretching in wall-to-wall applications by the use of mechanical devices or tools.
11. The laminated carpet system of claim 10 in which the one part of the hook and loop attachment system in the secondary backing (16) is loops (18), and the other part in the separate strip-like piece (22) is hooks (26) and in which the loops (18) are integrally sewn into the secondary backing (16).
  12. The laminated carpet system of claim 11 in which the top side of the strip-like piece (22) is releaseably covered when the carpet (10) is placed in location on the floor to prevent attachment of the carpet (10) and strip-like piece (22) together prior to the fitting of the carpet in the room.
  13. A laminated carpet for use in wall-to-wall installation in a location by cutting and fitting of the carpet to fit the contours of the location on-site and for attachment of the carpet on-site to a floor wherein the carpet has a primary backing layer (12) having pile element means (14) substantially covering a first side of the primary backing layer, characterized in that the carpet further comprises:
    - (i) a secondary backing layer (16) having loop element means (18) substantially covering a first side of the secondary backing;
    - (ii) a foam layer (40) having adhesive and resilient cushioning properties interposed between the primary backing layer (12) and the secondary backing layer (16) for securing the layers together such that the pile element means (14) and loop element means (18) are exposed on opposite faces and a separate underpad is not required; and wherein:
    - (iii) the carpet is substantially free of stiffener so as not to require stretching in wall-to-wall applications by the use of mechanical devices or tools.

cal devices.

14. The laminated carpet of claim 13 in which the loop element means (18) are integrally sewn into the entire back of the carpet.

15. The laminated carpet as claimed in claim 11 in which the foam layer (40) includes latex.

16. A carpet laying method for laying a laminated wall-to-wall carpet substantially free of stiffening, having loops (18) as a first part of a hook and loop anchorage system, and the second part of the hook and loop anchorage system comprising a tape (22) detached from the carpet (10) having an adhesive underside (28) protected by a removable covering (30) for securing it to the floor, and a top side having hooks (26) protected by a detachable covering, comprising the steps of:

(a) positioning the carpet (10) in a room and cutting and fitting the carpet to the contours of the location on-site,

(b) folding back a portion of the carpet (10) to expose a portion of the floor substantially at least along the edges and seams,

(c) removing the removable covering (30) from the adhesive underside (28) of the tape (22) and attaching such tape to the floor,

(d) manually stretching the carpeting into a desired overlapping position over the tape (22),

(e) removing the detachable covering from the hooks (26) and placing the carpet (10) downwardly onto the loops (18) to engage the hook and loop anchorage system,

(f) repeating steps (a), (b), (c), (d) and (e) as required to attach the carpet (10) to the floor without mechanical stretching.

#### Patentansprüche

1. Mehrschichtiges Teppichsystem mit einem Teppich und einer Verankerungseinrichtung zur Verwendung beim Verlegen von Wand zu Wand in einem Raum durch Schneiden und Anpassen des Teppichs an die Umrissse des Raums an Ort und Stelle und zur Befestigung des Teppichs an Ort und Stelle an einem Fußboden, wobei das Teppichsystem aufweist:

(i) eine primäre Rückenschicht (12) mit Florelementen (14), welche eine erste Seite der primären Rückenschicht im wesentlichen überdecken,

(ii) eine sekundäre Rückenschicht (16) mit Schlaufenelementen (18), die eine erste Seite der sekundären Rückenschicht im we-

sentlichen überdecken.

(iii) Mittel (20) zur Befestigung der sekundären Rückenschicht (16) an der primären Rückenschicht (12), so daß die Florelemente (14) und die Schlaufenelemente (18) an entgegengesetzten Flächen des Teppichs freiliegen, und

(iv) ein getrenntes oder abtrennbares streifenartiges Stück mit einer Hakeneinrichtung (26) auf einer ersten Seite und auf einer zweiten, entgegengesetzten Seite vorgesehenen Mitteln zur Befestigung des Teppichs an Ort und Stelle, um die Hakeneinrichtung (26) durch Eingriff der Hakeneinrichtung (26) mit den Schlaufenelementen (18) wenigstens an einem Teil der Schlaufenelemente (18) auf der sekundären Rückenschicht (16) zu befestigen und den Teppich ohne separate Unterlage am Fußboden festzuhalten;

(v) wobei der Teppich weitgehend frei von Versteifungsmitteln ist, so daß bei Verlegung von Wand zu Wand kein Strecken unter Anwendung mechanischer Einrichtungen erforderlich ist.

2. Mehrschichtiges Teppichsystem nach Anspruch 1, wobei das Mittel zur Befestigung der sekundären Rückenschicht (16) an der primären Rückenschicht (12) ein Klebemittel (21) aufweist, das im wesentlichen entlang der gesamten Oberfläche der zweiten Seite der primären Rückenschicht (12) aufgetragen wird, um die Florelemente (14) in die primäre Rückenschicht (12) einzubringen.

3. Mehrschichtiges Teppichsystem nach Anspruch 1, wobei das Mittel zur Befestigung der sekundären Rückenschicht (16) an der primären Rückenschicht (12) eine zwischen die primäre Rückenschicht (12) und die sekundäre Rückenschicht (16) eingelegte Schaumlage (40) mit Haft- und elastischen Polstereigenschaften aufweist.

4. Mehrschichtiges Teppichsystem nach Anspruch 3, wobei die Schaumlage (40) aus Latex besteht.

5. Mehrschichtiges Teppichsystem nach Anspruch 1 bis 4, wobei die Hakeneinrichtung separat in Form eines verhältnismäßig schmalen Bandes (22) geliefert wird.

6. Mehrschichtiges Teppichsystem nach Anspruch 1 bis 5, wobei das Mittel zur Befestigung an Ort und Stelle für die Hakeneinrichtung ein Haftkleber (28) ist.



7. Mehrschichtiges Teppichsystem nach Anspruch 6, wobei der Haftkleber (28) an der Hakeneinrichtung mit einem Schutzpapier (30) überzogen ist, das die Haftung verhindert und abgezogen und entfernt werden kann, um die Befestigung der Hakeneinrichtung am Fußboden zu ermöglichen.
8. Mehrschichtiges Teppichsystem nach Anspruch 1 bis 7, wobei die Hakeneinrichtung ferner mit einer Hakenabdeckeinrichtung auf der ersten Seite der Hakeneinrichtung (26) versehen ist, damit ein vorzeitiger Eingriff mit den Schlaufenelementen (18) verhindert wird.
9. Mehrschichtiges Teppichsystem nach Anspruch 8, wobei die erste Seite der Hakeneinrichtung (26) eine hakenfreie Fläche enthält und die Hakenabdeckeinrichtung ein Schutzpapier aufweist, das an dieser Fläche durch einen abziehbaren Haftkleber befestigt ist, und wobei sich das Papier über die Hakeneinrichtung (26) erstreckt, um einen vorzeitigen Eingriff der Haken mit den Schlaufen zu verhindern.
10. Mehrschichtiges Teppichsystem mit einem Teppich und einer Verankerungseinrichtung zur Verwendung beim Verlegen von Wand zu Wand in einem Raum durch Schneiden und Anpassen des Teppichs an die Umriss des Raums an Ort und Stelle und zur Befestigung an einem Fußboden, wobei das Teppichsystem aufweist:
- (i) eine primäre Rückenschicht (12) mit einem Flor (14), der eine erste Seite der primären Rückenschicht im wesentlichen überdeckt,
  - (ii) eine sekundäre Rückenschicht (16) mit einem Teil eines Haken- und Schlaufen-Befestigungssystems (18, 26), das eine erste Seite der sekundären Rückenschicht (16) im wesentlichen überdeckt,
  - (iii) ein Haftmittel (21), das im wesentlichen entlang der gesamten Oberfläche der zweiten Seite der primären Rückenschicht (12) aufgetragen ist, um den Flor in die primäre Rückenschicht einzubringen und die primäre und die sekundäre Rückenschicht (12, 16) aneinander zu befestigen, und
  - (iv) ein getrenntes streifenartiges Stück (22) mit einem zweiten Teil des Haken- und Schlaufen-Befestigungssystems (18, 26) an seiner Oberseite und einem Haftkleber (28) an seiner Unterseite zur Befestigung an Ort und Stelle am Fußboden;
  - (v) wobei die Teppichschichtung weitgehend frei von Versteifungsmitteln ist, so daß bei Verlegung von Wand zu Wand kein Strecken unter Anwendung mechanischer Einrichtungen oder Werkzeuge erforderlich ist.
11. Mehrschichtiges Teppichsystem nach Anspruch 10, wobei der eine Teil des Haken- und Schlaufen-Befestigungssystems in der sekundären Rückenschicht (16) aus Schlaufen (18), der andere Teil in dem getrennten streifenartigen Stück (22) aus Haken (26) besteht, und wobei die Schlaufen (18) einstückig in die sekundäre Rückenschicht (16) eingenaht sind.
12. Mehrschichtiges Teppichsystem nach Anspruch 11, wobei die Oberseite des streifenartigen Stücks (22) beim Verlegen des Teppichs (10) auf dem Fußboden lösbar abgedeckt wird, um ein Aneinanderhaften des Teppichs (10) und des streifenartigen Stücks (22) vor der Anpassung des Teppichs im Raum zu verhindern.
13. Mehrschichtiger Teppich zur Verwendung beim Verlegen von Wand zu Wand in einem Raum durch Schneiden und Anpassen des Teppichs an die Umriss des Raums an Ort und Stelle und zur Befestigung des Teppichs an Ort und Stelle an einem Fußboden, wobei der Teppich eine primäre Rückenschicht (12) mit Florelementen (14) aufweist, die eine erste Seite der primären Rückenschicht im wesentlichen überdecken, dadurch gekennzeichnet, daß der Teppich ferner aufweist:
- (i) eine sekundäre Rückenschicht (16) mit Schlaufenelementen (18), die eine erste Seite der sekundären Rückenschicht im wesentlichen überdecken;
  - (ii) eine Schaumlage (40) mit Haft- und elastischen Polstereigenschaften, die zwischen die primäre Rückenschicht (12) und die sekundäre Rückenschicht (16) eingelegt ist, um die Schichten so aneinander zu befestigen, daß die Florelemente (14) und die Schlaufenelemente (18) an entgegengesetzten Seiten freiliegen und eine getrennte Unterlage nicht erforderlich ist; und wobei
  - (iii) der Teppich weitgehend frei von Versteifungsmitteln ist, so daß beim Verlegen von Wand zu Wand kein Strecken unter Anwendung mechanischer Einrichtungen erforderlich ist.
14. Mehrschichtiger Teppich nach Anspruch 13, wobei die Schlaufenelemente (18) einstückig in die gesamte Rückseite des Teppichs eingenaht sind.



15. Mehrschichtiger Teppich nach Anspruch 11, wobei die Schaumlage (40) Latex aufweist.

16. Teppichverlegeverfahren zum Verlegen eines mehrschichtigen, von Wand zu Wand verlegbaren, weitgehend versteifungsmittelfreien Teppichs mit Schlaufen (18) als einem ersten Teil eines Haken- und Schlaufen-Verankerungssystems, wobei der zweite Teil des Haken- und Schlaufen-Verankerungssystems ein vom Teppich (10) getrenntes Band (22) mit einer haftenden, durch eine entfernbare Abdeckung (30) geschützten Unterseite (28) zur Befestigung am Fußboden und einer Oberseite mit durch eine ablösbare Abdeckung geschützten Haken (26) aufweist; mit den Verfahrensschritten:

(a) Auslegen des Teppichs (10) in einem Raum und Schneiden und Anpassen des Teppichs an die Umriss des Raums an Ort und Stelle,

(b) Zurückschlagen eines Teils des Teppichs (10), um im wesentlichen zumindest entlang der Ränder und Nähte einen Teil des Fußbodens freizulegen,

(c) Entfernen der ablösbaren Abdeckung (30) von der haftenden Unterseite (28) des Bandes (22) und Befestigen des Bandes am Fußboden,

(d) Strecken des Teppichbelags von Hand in eine gewünschte Überlappungsposition über dem Band (22),

(e) Entfernen der ablösbaren Abdeckung von den Haken (26) und Ablegen des Teppichs (10) nach unten auf die Schlaufen (18), um das Haken- und Schlaufen-Verankerungssystem in Eingriff zu bringen,

(f) Wiederholen der Schritte (a), (b), (c), (d) und (e) nach Bedarf, um den Teppich (10) ohne mechanisches Strecken am Fußboden zu befestigen.

#### Revendications

1. Système de tapis laminé, comprenant un tapis et des moyens d'accrochage pour une pose mur à mur à un emplacement par découpe et ajustement du tapis afin de l'adapter aux contours de l'emplacement sur place et pour une fixation du tapis sur place à un plancher, le système de tapis comprenant :

(i) une première couche de renforcement (12) possédant des moyens (14) constitués de poils recouvrant substantiellement un premier côté du premier renforcement,

(ii) une seconde couche de renforcement (16) possédant des moyens (18) constitués de boucles recouvrant substantiellement un

premier côté du second renforcement,

(iii) des moyens (20) permettant de fixer la seconde couche de renforcement (16) à la première couche de renforcement (12) de façon que les moyens (14) constitués de poils et les moyens (18) constitués de boucles soient exposés sur des faces opposées du tapis, et

(iv) une pièce en forme de bande séparée ou séparable possédant des moyens (26) d'accrochage sur un premier côté et possédant des moyens sur un second côté opposé permettant une fixation sur place au plancher, pour fixer les moyens (26) d'accrochage à au moins une portion des moyens (18) constitués de boucles sur la seconde couche de renforcement (16) par l'engagement des moyens (26) d'accrochage dans les moyens (18) constitués de boucles afin de maintenir le tapis contre le plancher sans matelas séparé dessous ;

(v) dans lequel le tapis est substantiellement débarrassé de raidisseur de façon à ne pas nécessiter un étirage lors de poses mur à mur au moyen de dispositifs mécaniques.

2. Système de tapis laminé selon la revendication 1 dans lequel les moyens (20) permettant de fixer la seconde couche de renforcement (16) à la première couche de renforcement (12) comprennent un adhésif (21) placé sur substantiellement toute la surface du second côté de la première couche de renforcement (12) afin de plaquer les moyens (14) constitués de poils à l'intérieur de la première couche de renforcement (12).

3. Système de tapis laminé selon la revendication 1 dans lequel les moyens (20) permettant de fixer la seconde couche de renforcement (16) à la première couche de renforcement (12) comprennent une couche de mousse (40) interposée entre la première couche de renforcement (12) et la seconde couche de renforcement (16), possédant des propriétés adhésives et d'amortissement élastique.

4. Système de tapis laminé selon la revendication 3 dans lequel la couche de mousse (40) est en latex.

5. Système de tapis laminé selon les revendications 1 à 4 dans lequel les moyens d'accrochage sont fournis séparément sous la forme d'un ruban (22) de largeur relativement mince.

6. Système de tapis laminé selon les revendications 1 à 5 dans lequel les moyens de fixation sur place des moyens d'accrochage sont un auto-adhésif (28).
7. Système de tapis laminé selon la revendication 6 dans lequel l'auto-adhésif (28) des moyens d'accrochage est recouvert d'un papier anti-adhésif (30) qui empêche une adhérence et qui peut être déroulé et enlevé afin de permettre une fixation des moyens d'accrochage au plancher.
8. Système de tapis laminé selon les revendications 1 à 7 dans lequel les moyens d'accrochage comprennent également des moyens de recouvrement des crochets sur le premier côté des moyens d'accrochage (26), de façon à empêcher une fixation prématurée des moyens (18) constitués de boucles.
9. Système de tapis laminé selon la revendication 8 dans lequel le premier côté des moyens (26) d'accrochage comporte une zone n'accrochant pas et les moyens de recouvrement des crochets comprennent un papier anti-adhésif fixé à cette zone par un auto-adhésif amovible, et dans lequel le papier s'étend sur les moyens (26) d'accrochage de façon à empêcher une fixation prématurée des moyens (18) constitués de boucles avec les crochets.
10. Système de tapis laminé, comprenant un tapis et des moyens d'accrochage pour une pose mur à mur à un emplacement par découpe et ajustement du tapis afin de l'adapter aux contours de l'emplacement sur place et pour une fixation du tapis sur place à un plancher, le système de tapis comprenant :
- (i) une première couche de renforcement (12) possédant des moyens (14) constitués de poils recouvrant substantiellement un premier côté du premier renforcement,
  - (ii) une seconde couche de renforcement (16) possédant une première partie d'un système de fixation (18, 26) à boucles et crochets recouvrant substantiellement un premier côté du second couche de renforcement (16),
  - (iii) des moyens (21) adhésifs placés sur substantiellement toute la surface du second côté de la première couche de renforcement (12) afin de plaquer les moyens constitués de poils à l'intérieur de la première couche de renforcement et fixer les première et seconde couches de renforcement (12, 16) l'une à l'autre, et
- (iv) une pièce séparée (22) en forme de bande possédant une seconde partie du système de fixation (18, 26) à boucles et crochets sur son côté supérieur et des moyens auto-adhésifs (28) sur son côté inférieur permettant une fixation sur place au plancher ;
  - (v) dans lequel le tapis est substantiellement débarrassé de raidisseur de façon à ne pas nécessiter un étirage lors de poses mur à mur au moyen de dispositifs ou outils mécaniques.
11. Système de tapis laminé selon la revendication 10 dans lequel la première partie du système de fixation à boucles et crochets de la seconde couche de renforcement (16) est constituée de boucles (18), et la seconde partie dans la pièce séparée (22) en forme de bande est constituée de crochets (26), et dans lequel les boucles (18) sont intégralement brochées dans la seconde couche de renforcement (16).
12. Système de tapis laminé selon la revendication 11 dans lequel le côté supérieur de la pièce séparée (22) en forme de bande est recouverte provisoirement quand le tapis est placé à un emplacement sur le plancher, afin d'empêcher la fixation ensemble du tapis (10) et de la pièce séparée (22) en forme de bande avant l'ajustement du tapis à la salle.
13. Système de tapis laminé pour une pose mur à mur à un emplacement par découpe et ajustement du tapis afin de l'adapter aux contours de l'emplacement sur place et pour une fixation du tapis sur place à un plancher, dans lequel le tapis comprend une première couche de renforcement (12) possédant des moyens (14) constitués de poils recouvrant substantiellement un premier côté de la première couche de renforcement, caractérisé en ce que le tapis comprend également :
- (i) une seconde couche de renforcement (16) possédant des moyens (18) constitués de boucles recouvrant substantiellement un premier côté du second couche de renforcement,
  - (ii) une couche de mousse (40), possédant des propriétés adhésives et d'amortissement élastique, interposée entre la première couche de renforcement (12) et la seconde couche de renforcement (16) afin de fixer la seconde couche de renforcement (16) à la première couche de renforcement (12), de façon que les moyens (14) constitués de poils et les moyens (18) constitués de boucles soient exposés sur des faces opposées

du tapis et qu'un matelas séparé ne soit pas nécessaire en dessous.

et dans lequel :

- (iii) le tapis est substantiellement débarrassé de raidisseur de façon à ne pas nécessiter un étirage lors de poses mur à mur au moyen de dispositifs mécaniques. 5

14. Système de tapis laminé selon la revendication 13 dans lequel les moyens (18) constitués de boucles sont intégralement brochées dans tout le revers du tapis. 10
15. Système de tapis laminé selon la revendication 11 dans lequel la couche de mousse (40) comprend du latex. 15
16. Procédé de pose de tapis permettant une pose mur à mur d'un tapis laminé substantiellement débarrassé de raidisseur, possédant des moyens (18) constitués de boucles en tant que première partie d'un système de fixation à boucles et crochets, et la seconde partie du système de fixation à boucles et crochets comprenant un ruban (22) détaché du tapis (10) et possédant un côté inférieur adhésif (28) protégé par un film amovible (30) afin de le fixer au plancher, et un côté supérieur possédant des crochets (26) protégés par un film détachable, comprenant les étapes de : 20
  - (a) positionnement du tapis (10) dans une pièce et découpe et ajustement du tapis aux contours de l'emplacement sur place, 25
  - (b) repliement d'une portion du tapis (10) afin de découvrir une portion du plancher substantiellement au moins le long des bords et des coutures, 30
  - (c) enlèvement du film amovible (30) du côté inférieur adhésif (28) du ruban (22) et fixation de ce ruban au plancher, 40
  - (d) étirage manuel du tapis dans une position désirée de pose sur le ruban (22),
  - (e) enlèvement du film détachable recouvrant les crochets (26) et placement du tapis (10) de façon que les boucles (18) s'engagent avec les crochets du système d'accrochage à boucles et crochets, 45
  - (f) répétition des étapes (a), (b), (c), (d) et (e) au besoin afin de fixer le tapis (10) au plancher sans étirage mécanique. 50



